

ALLEN & HEATH

MPS14

Rack Mount Power Supply

USER GUIDE

Publication AP3898

Limited One Year Warranty

This product has been manufactured in the UK by ALLEN & HEATH and is warranted to be free from defects in materials or workmanship for period of one year from the date of purchase by the original owner.


To ensure a high level of performance and reliability for which this equipment has been designed and manufactured, read this User Guide before operating.

In the event of a failure, notify and return the defective unit to ALLEN & HEATH or its authorised agent as soon as possible for repair under warranty subject to the following conditions

Conditions Of Warranty

1. The equipment has been installed and operated in accordance with the instructions in this User Guide
2. The equipment has not been subject to misuse either intended or accidental, neglect, or alteration other than as described in the User Guide or Service Manual, or approved by ALLEN & HEATH.
3. Any necessary adjustment, alteration or repair has been carried out by ALLEN & HEATH or its authorised agent.
4. The defective unit is to be returned carriage prepaid to ALLEN & HEATH or its authorised agent with proof of purchase.
5. Units returned should be packed to avoid transit damage.

In certain territories the terms may vary. Check with your ALLEN & HEATH agent for any additional warranty, which may apply.

 This product complies with the European Electromagnetic Compatibility directives 89/336/EEC & 92/31/EEC and the European Low Voltage Directives 73/23/EEC & 93/68/EEC.

Any changes or modifications to the power unit not approved by Allen & Heath could void the compliance of the product and therefore the users authority to operate it.

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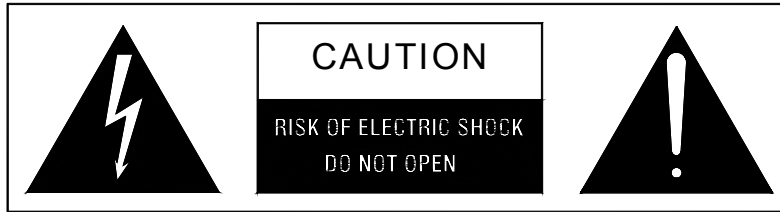
Manufactured in the United Kingdom by Allen & Heath Limited

Kernick Industrial Estate, Penryn, Cornwall, TR10 9LU, UK

<http://www.allen-heath.com>

Important Safety Instructions

WARNINGS - Read the following before proceeding :



ATTENTION: RISQUE DE CHOC ELECTRIQUE – NE PAS OUVRIR

- Read instructions:** Retain these safety and operating instructions for future reference. Adhere to all warnings printed here and on the power unit. Follow the operating instructions printed in this User Guide.
- Do not remove covers:** Operate the power unit with its covers correctly fitted. Refer any service work on the power unit to competent technical personnel only.
- Power sources:** Connect the power unit to a mains power only of the type described in this User Guide and marked on the rear panel. Use only the power cord with sealed mains plug appropriate for your local mains supply as provided with the power unit. If the provided plug does not fit into your outlet consult your service agent for assistance.
- Power cord routing:** Route the power cord so that it is not likely to be walked on, stretched or pinched by items placed upon or against it.
- Grounding:** Do not defeat the grounding and polarisation means of the power cord plug. Do not remove or tamper with the ground connection in the power cord.



WARNING: This equipment must be earthed.

- Water and moisture:** To reduce the risk of fire or electric shock do not expose the power unit to rain or moisture or use it in damp or wet conditions. Do not place containers of liquids on it which might spill into any openings.
- Ventilation:** Do not obstruct the ventilation slots or position the power unit where the air flow required for ventilation is impeded. If the power unit is to be operated in a flightcase ensure that it is constructed to allow adequate ventilation.
- Heat and vibration:** Do not locate the power unit in a place subject to excessive heat or direct sunlight as this could be a fire hazard. Locate the power unit and its power unit away from any equipment which produces heat or causes excessive vibration.
- Servicing:** Switch off the equipment and unplug the power cord immediately if it is exposed to moisture, spilled liquid, objects fallen into the openings, the power cord or plug become damaged, during lightening storms, or if smoke, odour or noise is noticed. Refer servicing to qualified technical personnel only.
- Installation:** Install the power unit in accordance with the instructions printed in this User Guide. Do not connect the output of power unit to any other equipment other than that specified by Allen & Heath.



Important Mains plug wiring instructions.

The power unit is supplied with a moulded mains plug fitted to the AC mains power lead. Follow the instructions below if the mains plug has to be replaced.

The wires in the mains lead are coloured in accordance with the following code:

TERMINAL		WIRE COLOUR	
		European	USA/Canada
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN & YELLOW	GREEN

The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or with the Earth symbol.

This appliance must be earthed.

The wire which is coloured Blue must be connected to the terminal in the plug which is marked with the letter N.

The wire which is coloured Brown must be connected to the terminal in the plug which is marked with the letter L.

Ensure that these colour codes are followed carefully in the event of the plug being changed.

Precautions

Damage :

To prevent damage to the power unit cosmetics, avoid placing heavy objects on the unit, scratching the surface with sharp objects, or subjecting the power unit to rough handling and vibration.

Environment :

Protect from excessive dirt, dust, heat and vibration when operating and storing. Avoid tobacco ash, smoke, drinks spillage, and exposure to rain and moisture. If the power unit becomes wet, switch off and remove power immediately. Allow to dry out thoroughly before using again.

Cleaning :

Avoid the use of chemicals, abrasives or solvents. The power unit is best cleaned with a soft brush and dry lint-free cloth. The use of electrical lubricants is not recommended.

Transporting :

The power unit should be transported in the original packing or purpose built flightcase to protect it from damage during transit.

Introduction

This user guide presents a quick reference to the **MPS14**. We recommend that you read this fully before starting. Included is information on installing, connecting and operating the power unit along with panel drawings and technical specification. For further information on the basic principles of audio system engineering, please refer to one of the specialist publications available from bookshops and audio equipment dealers.

Whilst we believe the information in this guide to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

We are able to offer further product support through our worldwide network of approved dealers and service agents. You can also access our Web site on the Internet for information on our product range, assistance with your technical queries or simply to chat about audio matters. To help us provide the most efficient service please keep a record of your power unit serial number, and date and place of purchase to be quoted in any communication regarding this product. The serial number is located on the rear panel.

Check out our home site for information on the company and its pedigree, our full product range and our design philosophy.

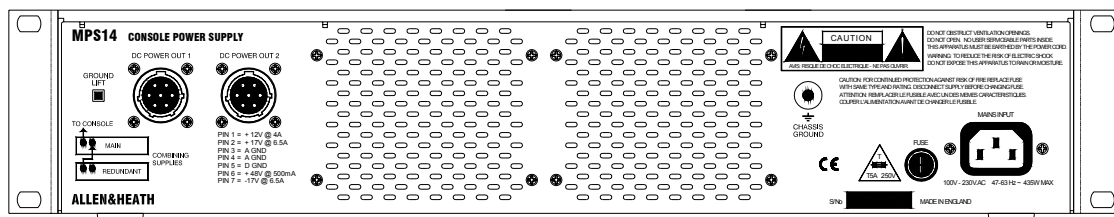
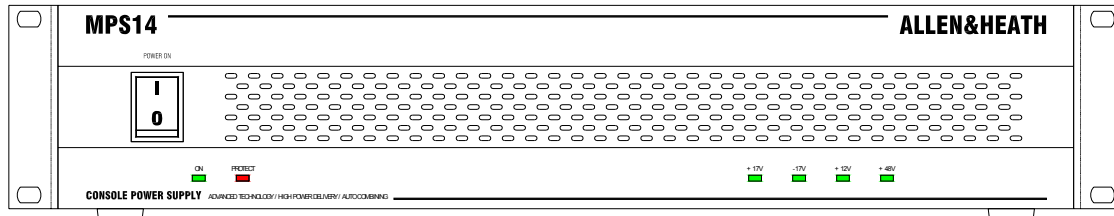
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The MPS14

The slimline MPS14 power supply uses switch mode technology to generate the DC voltages required by the console. It will operate from a wide range of ac mains input voltages. Full protection and thermally controlled fan cooling ensures the power unit will operate consistently. The MPS14 also has a built in combiner for connection to a second supply for backup.



Installation

Free standing

The MPS14 can be operated as a freestanding unit without requiring any special cooling arrangement, but should not be accidentally or deliberately covered in any way. Always stand the unit on a firm flat surface well away from any soft furnishings or carpet.

Rack mounting

The MPS14 is designed as a 19 inch rack mount unit and will occupy 2U (3.5 inches) of rack space. A pair of M4 threaded holes on each side at the rear of the chassis are provided for fixing brackets for supporting the rear of the unit.

An important consideration when rack-mounting the unit is the need for natural convection of airflow over the whole unit.

Good ventilation below the unit, in the floor or back of the rack, will ensure a path for continuous airflow.

Other equipment in the rack which is known not to produce a significant amount of heat should be mounted below the unit. Equipment which also relies on good airflow within the rack (i.e. most power amplifiers and other power supplies) should be given due consideration and some space should be provided between such units and between the MPS14 unit. Forced convection, by means of a fan-tray, may be desirable in this situation.

Location

As with any power supply that contains switch mode technology, it is preferable to provide a degree of physical isolation of the unit from other equipment, particularly that which carries low level audio signals, to avoid any possible interference pick-up. For this reason the unit is provided with a long (2.9m) output cable to enable it to be positioned away from the mixing console. For the same reason, when rack-mounting it is preferable to avoid locating the unit next to signal processing equipment.

Earthing

Finally, some consideration should be given to the earthing arrangement of the system, at the centre of which is the console and the MPS14. The console chassis is earthed, to the mains earth, via the power supply. When rack-mounting the MPS14 care should be taken to avoid any possible "ground loops" in the system which may introduce audible hum or buzz to otherwise clean audio signals. Ground loops occur where signal processing equipment patched to the console, has its signal earth connected to the equipment chassis. A ground loop is formed if the chassis of the signal processing equipment and the MPS14 chassis are in electrical contact through the fixing rails they share in the rack. The MPS14 has audio 0V and mains earth connected internally. If a ground loop is formed operation of the "ground lift" switch on the rear panel of the MPS14 may reduce any unwanted hum or buzz.

Using the MPS14

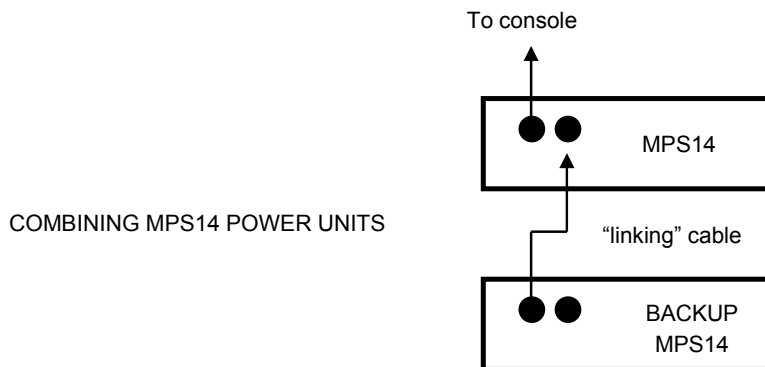
The MPS14 will operate from an ac mains supply voltage from 100V to 240V. Before switching on the power supply, check that the ac mains fuse is of the correct type and rating. This is marked on the rear panel of the power unit. The power supply is provided with an IEC type mains connector and a moulded mains plug. Check that this is suitable for connection to the wall socket outlet.

Always switch the power supply off before connecting or disconnecting the console power cables, removing or installing console modules and any servicing work. In the event of an electrical storm, or large mains voltage fluctuations, immediately switch off the power supply and disconnect from the mains supply.

During normal operation some heat is generated. This is expelled via the front panel ventilation holes.

Combining MPS14 Power units

Each MPS14 power unit has a built in combiner allowing the direct connection of other MPS14 power units for backup. Connect the two power units together using the MPS14 "linking" cable (A&H Part No: 002-584) by plugging into the DC output sockets of each power unit.



Note; the "linking" cable can be connected to either of the two MPS14 DC output connectors on both units.

Cleaning and Replacing the fan filters.

At regular intervals, it is recommended that the two foam fan filters are cleaned or replaced to ensure efficient operation of the power unit. Failure to do so may reduce the efficiency or even damage the power unit.

Use a vacuum cleaner to remove dust from the air intakes on the rear of the power unit

If the filters need replacing contact your nearest service agent or Allen & Heath dealer.

Fan filter part No: AK4070

Replacing the mains fuse

The AC mains fuse is located on the rear of the MPS14 unit next to the AC mains connector. In the event of a mains surge or under-rated fuse value, the mains input fuse will rupture. Switch off the power supply and remove the mains lead plug from the "MAINS INPUT" socket on the rear of the unit.

Check the fuse and replace if necessary.



TO AVOID THE RISK OF FIRE REPLACE FUSE WITH THE CORRECT TYPE ONLY, AS INDICATED ON THE UNIT

AC~ mains input voltage	Fuse type
100V – 230V ± 10%	T 5A 250V 20mm

In the event of repeated failure of the mains fuse, consult the local dealer from where the unit was purchased.

Technical specification

Mains Input Voltage Range 100 - 240 ± 10% VAC @ 47-63 Hz

Power consumption (max.) 435W

Mains Fuse: 100 - 240 V~ T 5.0A/250V

Internal Fuses:

PCB Ident	Fuse type
F1 (+12V)	T 6.3A 250V 20mm
F2 (+48V)	T 1.6A 250V 20mm
F18 (aux psu)	T 500mA 250V 20mm

DC Outputs

DC Voltage Rail	Output Current
+17 VOLTS	6.5A Max.
-17 VOLTS	6.5A Max.
+12 VOLTS	4A Max.
+48 VOLTS	500mA Max.

DC Output Socket Pin Connections

Pin No:	Connection
1	+12 Volts
2	+17 Volts
3	Chassis
4	A GND
5	D GND
6	+48 Volts
7	-17 Volts

Overall Dimensions

Front Panel:	482mm x 88mm	19 inch 2U
Width (excluding rack ears):	440mm	17.30 inches
Height including feet:	90mm	3.5 inches
Depth:	260mm	10.25 inches
Weight:	6Kg	13 pounds

Cable Assemblies

Assembly	Description	A&H Part no:
DC cable	2.9m MPS14 to ML5000 console cable assembly	002-583
DC LINK cable	0.75m MPS14 to MPS14 PSU "LINKING" cable assembly	002-584

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